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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,236	03/30/2001	Hai Chi Nguy	Q01-1025-US1/11198.64	6324

7590

05/07/2003

Steven G. Roeder
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EXAMINER

DAVIS, DAVID DONALD

ART UNIT

PAPER NUMBER

2652

DATE MAILED: 05/07/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,236

Applicant(s)

NGUY, HAI CHI

Examiner

David D. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

2. Claim 14 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the specification does not enable a skilled artisan to make and/or use a disk drive with perpendicular recording.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM Technical Disclosure Bulletin, November 1990 (hereinafter: IBM) in view of Nakazawa et al (JP 10-69763). As per claims 1, 12-13, 24 and 27, IBM shows a drive housing for a disk drive 2 having a storage disk having a storage surface. IBM also shows a housing shield 1 positioned

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near the storage disk. The housing shield is sized, shaped and formed from material so that the housing shield has an attenuation of field of at least approximately 10 dB.

Regarding claim 1, IBM, however, is silent as to the drive housing including a shield.

Nakazawa et al shows in figure 1 the drive housing including a shield.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to include in the housing of IBM a shield as taught by Nakazawa. The rationale is as follows: one of ordinary skill in the art at the time the invention was made would have been motivated to provide housing a shield so as to enable "effective isolation of flux inside and outside of case, due to use of case and cover consisting of electromagnetic shielding". See Derwent Abstract of Nakazawa.

As per claims 2, 19 and 28, the housing shield of Nakazawa, as shown in figure 1, includes a base shield portion 1 and a cover shield portion 1b that are positioned substantially parallel to the storage surface of the storage disk. The storage disk is positioned substantially between the cover shield 1b portion and the base shield portion 1. As per claim 3, the cover shield portion 1b and the base shield portion 1 are sized and shaped to shield the storage disk from an external magnetic field. As per claims 4 and 20, the cover shield portion 1b and the base shield portion 1 of Nakazawa are sized and shaped to shield the storage disk from an external magnetic field that is substantially perpendicular to the storage surface of the storage disk

As per claims 5 and 21, the storage disk of Nakazawa et al is positioned entirely between a superimposition of the cover shield portion 1b onto the base shield portion 1. As per claim 6, the housing shield further includes a wall shield portion 1a that secures the cover shield portion 1b to the base shield portion 1. As per claim 7, the wall shield portion 1a of Nakazawa et al, as

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shown in figure 1, is positioned substantially perpendicular to the storage surface of the storage disk. As per claims 8 and 22, the housing shield of Nakazawa et al, as shown in figure 1, further includes a plurality of wall shield portions 1a that are substantially perpendicular to the storage surface of the storage disk, and wherein the wall shield portions secure the cover shield portion 1b to the base shield portion 1.

As per claim 9, IBM discloses that the housing shield has an attenuation of field of at least approximately 25 dB. As per claims 10 and 26, the housing shield of IBM has an attenuation of field of at least approximately 50 dB.

As per claims 11, 16, 23 and 25, the housing shield of IBM is considered to substantially be formed from a nickel-iron alloy having a relative permeability of at least approximately 50,000. Assuming arguendo that IBM is silent as to the housing shield being be formed from a nickel-iron alloy having a relative permeability of at least approximately 50,000, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to manufacture the housing shield from a nickel-iron alloy having a relative permeability of at least approximately 50,000 as suggested in the art. The rationale is as follows: the purpose of the housing shield is to attenuate electromagnetic fields. The shield need not be formed from a nickel-iron alloy having a relative permeability of at least approximately 50,000 to attenuate an electromagnetic field. Realizing this, one of ordinary skill in the art at the time the invention was made would have been motivated to specify that the material of the shield is a nickel-iron alloy having a relative permeability of at least approximately 50,000, which is well within the purview of a skilled artisan and absent an unobvious result, to aid in the manufacturing process and procurement, and effectively attenuate electromagnetic fields.

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Regarding claim 14, IBM is silent as to the disk drive being a perpendicular recording drive. Official notice is taken of the fact that perpendicular recording drives are notoriously old and well known in the disk drive art. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the disk drive of IBM with a perpendicular recording transducers as taught in the art. The rationale is as follows: one of ordinary skill in the art at the time the invention was made would have been motivated to provide a perpendicular recording transducer in a disk drive as to increase the disk storage capacity.

As per claim 15, the housing shield of Nakawaza includes a base shield portion 1 that is sized and shaped to shield the storage disk from an external magnetic field. The base shield 1 is positioned substantially parallel to the storage surface of the storage disk. A cover shield portion 1b is sized and shaped to shield the storage disk from the external magnetic field. The cover shield 1b is positioned substantially parallel to the storage surface of the storage disk and a plurality of wall shield portions 1a are substantially perpendicular to the storage surface of the storage disk. The wall shield portions 1a secure the cover shield portion to the base shield portion. IBM discloses that the housing shield has an attenuation of field of at least approximately 25 dB.

As per claims 17 and 18, the housing shield of IBM is considered to have a thickness of at least approximately 30 millimeters and be substantially formed from material having a relative permeability of at least approximately 100,000. Assuming arguendo that IBM is silent as to the housing shield having a thickness of at least approximately 30 millimeters and be substantially formed from material having a relative permeability of at least approximately 100,000, it would have been obvious to a person having ordinary skill in the art at the time the invention was made

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to manufacture the housing shield so that it had a thickness of at least approximately 30 millimeters and be substantially formed from material having a relative permeability of at least approximately 100,000 as suggested in the art. The rationale is as follows: the purpose of the housing shield is to attenuate electromagnetic fields. The shield need not be have a thickness of at least approximately 30 millimeters and be substantially formed from material having a relative permeability of at least approximately 100,000 to attenuate an electromagnetic field. Realizing this, one of ordinary skill in the art at the time the invention was made would have been motivated to specify that the material of the shield has a thickness of at least approximately 30 millimeters and be substantially formed from material having a relative permeability of at least approximately 100,000, which is well within the purview of a skilled artisan and absent an unobvious result, to aid in the manufacturing process and procurement, and effectively attenuate electromagnetic fields.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Davis whose telephone number is (703) 308-1503. The examiner can normally be reached on Mon., Tues., Thurs. and Fri. between 7:30-6:00. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900. Any other

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inquiry should be directed to the customer service center whose telephone number is (703) 306-0377.


David D. Davis
Primary Examiner
Art Unit 2652

ddd
May 5, 2003